IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application   : **10/014,179**

Applicant(s)   : **DIMITROVA et al.**

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Examiner   : **BAIG, Sahar A.**

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Title: **AFFECTIVE TELEVISION MONITORING AND CONTROL**

Mail Stop: **APPEAL BRIEF - PATENTS**
Commissioner for Patents
Alexandria, VA 22313-1450

APPEAL UNDER 37 CFR 41.37

Sir:

    This is an appeal from the decision of the Examiner dated 28 August 2009, finally rejecting claims 1, 3-8, 10-34, and 36-40 of the subject application.

    This paper includes (each beginning on a separate sheet):

1. **Appeal Brief;**
2. **Claims Appendix;**
3. **Evidence Appendix; and**
4. **Related Proceedings Appendix.**

APPEAL BRIEF

I. REAL PARTY IN INTEREST

The above-identified application is assigned, in its entirety, to **Koninklijke Philips Electronics N. V.**

II. RELATED APPEALS AND INTERFERENCES

Appellant is not aware of any co-pending appeal or interference that will directly affect, or be directly affected by, or have any bearing on, the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 2, 9, and 35 are canceled.

Claims 1, 3-8, 10-34, and 36-40 are pending in the application.

Claims 1, 3-8, 10-34, and 36-40 stand rejected by the Examiner under 35 U.S.C. 103(a).

These rejected claims are the subject of this appeal.

IV. STATUS OF AMENDMENTS

No amendments were filed subsequent to the final rejection in the Office Action dated 28 August 2009.

V. SUMMARY OF CLAIMED SUBJECT MATTER[1]

The invention addresses determining user preferences based on the physical reaction of a viewer to particular segments of a program (applicants' page 18, lines 7-10). Each segment has corresponding descriptive information, and the interpretation of the viewer reaction is associated with this descriptive information (page 29, lines 11-13; line 20 – page 30, line 18; page 31, lines 12-19). In this manner, the viewer's likely preferences for subsequent programs having this same descriptive information can be determined (page 31. The viewer's reaction is determined based on the viewer's physical reaction as each segment is displayed, using biometric and other sensory inputs (page 20, lines 13-17). These sensory inputs are analyzed to determine whether the user's physical reaction can be associated with a recognizable emotional response (page 25, lines 5-15), and this emotional response is used to establish the viewer's preferences for the descriptive information corresponding to the displayed segment (page 31, lines 3-11). For example, if the descriptive information is "comedy", or "slap-stick", and the viewer's emotional response is determined to be "laughing", the system will determine that the user enjoys/prefers comedy or slap-stick scenes. Of particular significance, the recognizable emotional responses are associated with the descriptive information associated with the program being displayed at the time, and not the program per se (page 30, lines 15-18).

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[1] It is respectfully noted that it is not the appellants' intention that the claimed embodiments of this invention be limited to operation within the example embodiments described in this brief, beyond what is required by the claim language. These examples and their description are provided to facilitate ease of understanding and to comply with the requirements of an appeal brief, without intending that any further interpreted limitations be read into the claims as presented.

As claimed in independent claim 1, the invention comprises a system that includes:

a receiver (105) for receiving and displaying television programming (page 13, lines 1-4);

at least one sensor (132-138) for sensing a physical reaction by a viewer viewing the displayed programming and generating a signal representative of the physical reaction (page 15, lines 14-20);

a processor (170) for receiving and analyzing the signal to determine if it can be associated with at least one recognizable viewer emotional response, whereupon the processor associates the recognized emotional response with a descriptive information relating to a program that was being displayed when the physical reaction was sensed, to provide a viewer preference relating to the descriptive information (page 29, lines 11-13; line 20 – page 30, line 18; page 31, lines 12-19);

a memory device for storing the association between the programming description and sensed reaction as the viewer preference (page 31, line 21);

a monitoring system (435) that monitors subsequent programs that become available to be displayed (page 32, lines 14-16);

a recommender (460) that is configured to recommend subsequent programs based on the viewer preference (page 32, lines 8-13); and

a notification system for notifying and/or presenting a subsequent program based on the viewer preference (page 32, lines 13-14).

As claimed in dependent claim 10, the invention comprises the system of claim 1, further comprising an environmental sensor for sensing a change in the viewing environment and transmitting environmental information to the processor for use in analyzing viewer physical reactions (page 24, lines 1-4).

As claimed in independent claim 11, the invention comprises a method of assessing viewer response to television programming that includes one or more distinct segments, said method comprising:

providing a receiver (105) on which the viewer may view the programming (page 13, lines 1-4);

monitoring (505) at least one viewer physical condition (page 15, lines 14-20);

associating (515) the at least one viewer physical condition with a viewer response (page 34, lines 6-8);

determining (520) when a program segment is being received that corresponds to a pre-selected viewer response previously associated with the at least one viewer physical condition (page 34, lines 9-13);

associating (525) a viewer preference relating to the program segment based on the viewer response (page 34, lines 13-15);

determining (535) predicted preferences relating to subsequent programming based on the viewer preference (page 34, line 19 – page 35, line 2); and

notifying and/or presenting a subsequent program based on the viewer preference (page 32, lines 12-20).

As claimed in dependent claim 18, the invention comprises the method of claim 11, including:

determining at least one distinguishing characteristic of a displayed programming segment (page 29, lines 11-13; line 20 – page 30, line 18; page 31, lines 12-19);

associating a viewer response corresponding to a physical condition perceived during the display of the programming segment with a viewer preference level (page 34, lines 13-15); and

applying the preference level to enhance program selection (page 34, line 19 – page 35, line 2).

As claimed in dependent claim 19, the invention comprises the method of claim 18, wherein program selection is enhanced by providing a notification that specified future programming will contain at least one segment possessing the at least one distinguishing characteristic (page 32, lines 12-14).

As claimed in dependent claim 20, the invention comprises the method of claim 18, wherein the program selection is enhanced by inserting into a program a segment possessing the at least one distinguishing characteristic (page 33, lines 2-15).

As claimed in independent claim 34, the invention comprises a method of assessing listener response to audio programming that includes:

providing a receiver (105) having a speaker for presenting the audio programming to the listener (page 10, line 20 – page 11, line 6);

monitoring (505) at least one listener physical condition (page 15, lines 14-20);

associating (515) the at least one listener physical condition with a viewer emotional response (page 34, lines 6-8);

associating (520-525) the viewer emotional response with a user preference relating to the audio programming (page 34, lines 9-15);

recommending (535) subsequent audio programming based on the user preference (page 34, line 19 – page 35, line 2); and

notifying and/or presenting the subsequent audio programming based on the user preference (page 32, lines 12-20).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1, 3-8[2], 10-30, 34[3], 36, and 39-40 stand rejected under 35 U.S.C.
103(a) over Zawilinski (USP 5,676,138) in view of Hoffberg et al. (USP 6,400,996,
hereinafter Hoffberg) and Strubbe (USP 5,483,278).

Claims 31-32 stand rejected under 35 U.S.C. 103(a) over Zawilinski in view of
Hoffberg, Strubbe, and Black et al. (USP 5,774,591, hereinafter Black).

Claims 33 and 38 stand rejected under 35 U.S.C. 103(a) over Zawilinski in
view of Hoffberg, Strubbe, and Bentolila et al. (USPA 2003/0101449, hereinafter
Bentolila).

Claim 37 stands rejected under 35 U.S.C. 103(a) over Zawilinski in view of
Hoffberg, Strubbe, and Shinohara (USPA 2003/0005431).

VII. ARGUMENT

Claims 1-8, 10-30, 34, 36, and 39-40 stand rejected under
35 U.S.C. 103(a) over Zawilinski in view of Hoffberg and Strubbe
Claims 1, 3-8, 10, and 40

In KSR Int'l. Co. v. Teleflex, Inc., the Supreme Court noted that the analysis
supporting a rejection under 35 U.S.C. 103(a) should be made explicit, and that it is
"important to identify a reason that would have prompted a person of ordinary skill in
the relevant field to combine the [prior art] elements" in the manner claimed:

> "Often, it will be necessary ... to look to interrelated teachings of multiple patents;
> the effects of demands known to the design community or present in the
> marketplace; and the background knowledge possessed by a person having ordinary
> skill in the art, all in order to determine whether there was an **apparent reason** to
> combine the known elements in the fashion claimed by the patent at issue. To
> facilitate review, this analysis **should be made explicit**." KSR, 82 USPQ2d 1385 at
> 1396 (emphasis added).

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[2] The Office action states that claims 1-8 are rejected; however, claim 2 has been canceled.
[3] The Office action omits claim 34 in the statement of rejection. The applicants believe that this is a
typographical error because the Examiner subsequently references claim 34 as being "encompassed
within the rejection of Claim 1".

The applicants respectfully maintain that there is no apparent reason to combine Zawilinski and Hoffberg, and no apparent reason to combine Zawilinski, Hoffberg, and Strubbe. The applicants further maintain that even if such combinations were formed, they would not result in a combination of elements in the fashion claimed by the applicants.

Zawilinski discloses a system for collecting viewer reactions to television commercials; Zawilinski does not teach or suggest determining an association between the viewer reactions and descriptive information related to the stimuli that produces the reaction. Each television commercial is individually assessed, and there is no attempt in Zawilinski to provide descriptive information for each of the television commercials so that an association of the user's reaction with such descriptive information can be defined.

Hoffberg discloses an improved computer interface based on anticipation of a user's behavior:

> "The interface system predicts a desired **action** based on the user input, a past history of use, a context of use, and a set of predetermined or adaptive rules" (Hoffberg, column 51, lines 12-14);

> "Therefore, the present invention provides an optimized interface system which, upon recognizing a context, **dynamically reconfigures** the availability or ease of availability of functions and allow various subsets to be used through "shortcuts"" (Hoffman, column 52, lines 39-44);

> "In yet another embodiment, a present mood of a user is determined, either explicitly or implicitly, and the device **selects program material** that assists in a desired mood transition" (Hoffman, column 65, lines 24-27).

Hoffberg discloses that the predicted action may be a function of the person's mood, and teaches that monitoring the biometrics of the person can provide an indication of the user's current mood, and uses the user's current mood to produce the most likely subsequent action of the user, such as the selection of desirable program material. Hoffberg does not teach associating a recognized emotional response or mood with descriptive information relating to a program to identify a user's preference.

Further, even assuming in argument that an apparent reason exists for combining Zawilinski, Hoffberg, and Strubbe, the resultant combination fails to teach or suggest associating a recognized emotional response with a descriptive information relating to a program that was being displayed when the physical reaction was sensed, to provide a viewer preference relating to the descriptive information, as specifically claimed in claim 1, upon which claims 3-8, 10, and 40 depend.

The Examiner fails to identify where the prior art teaches forming an association between the viewer's emotional response and descriptive information related to the program being viewed.

Zawilinski teaches a monitoring system that assesses viewers' reactions to advertisements. Zawilinski does not teach or suggest providing descriptive information for segments of the advertisements, and does not teach associating the determined emotional response to such descriptive information. Zawilinski's design is intended for interactive use, wherein a viewer's emotional response over time can be displayed; any association of the emotional response to particular characteristics of the advertisements, if any, is left up to the person viewing the displayed emotion graphs.

Absent this association between emotional responses and a characteristic description of what was being displayed at the time (such as 'joke', 'slap-stick', 'monologue', etc.), Zawilinski's system cannot be used to determine the viewer's individual preferences for such characteristics, and cannot be used to predict the viewer's preferences for other displayed material. That is, absent this association of emotional responses to characteristic descriptions, Zawilinski's system would have no relevance to Hoffberg and Strubbe. The only suggestion for associating the monitored emotional responses to a characteristic description of the material being presented when the physical reaction was sensed comes from the applicants' teachings.

Hoffberg specifically discloses that the user provides feedback via a pointing device, or other input device, to indicate preferences for viewed events. The Examiner asserts that Hoffberg discloses "storing the association between the programming description and sensed reaction as the viewer preference (see Hoffberg, col. 113, lines 47-66). This assertion is incorrect. At the cited text, Hoffberg discloses:

> "FIG. 24 shows a system for correlating a user's preferences with a prospective or realtime occurrence of an event. The input device 2401, which is a remote control with a pointing device, such as a trackball, provides the user's input to the control 2402. The program is stored in a program memory 2403, after it is entered. The control 2402 controls a plant 2404, which is a VCR. The control also controls an on-screen programming interface 2405, through which the user interactively enters the program information. Each program entry of the user is submitted to the user history database and preferences module 2406, which may also receive explicit preference information, input by the user through the input device 2401. The prospective and real time event characterization unit 2407 uses any and/or all relevant information available in order to determine the character of a signal input, which is a video signal, from the signal receiver 2408. A signal analyzer 2409 provides a preliminary analysis and characterization of the signal, which is input to the prospective and real time event characterization unit 2407." (Hoffberg, column 113, lines 47-66, emphasis added.)

As is clearly evident, Hoffberg teaches receiving user input via a pointing device 2401, and characterizing the displayed event via a characterization unit 2407. At the cited text, Hoffberg does not teach an association between the program description and a sensed reaction, as asserted by the Examiner.

The Examiner asserts that "it would have been obvious to one of skill in the art to combine the teachings of Zawilinski and Hoffberg so that physiological data from which user's preference is inferred can be used to provide recommendations to the user based on viewer preferences" (Office action, page 5, lines 1-3). The applicants respectfully disagree with this assertion, and maintain that associating physiological data to user's preferences related to descriptive information, from which subsequent recommendations can be provided, is not taught or suggested by either Zawilinski or Hoffberg, but by the applicants.

Zawilinski does not teach or suggest associating an emotional response to a descriptor, and Hoffberg teaches receiving conventional feedback for indicating preferences. Strubbe does not specifically address how user preferences are obtained, except via a reference to USP 5,047,867, which teaches receiving conventional feedback for indicating preferences.

Because the Examiner has failed to identify where the prior art teaches or suggests associating a recognized emotional response with a descriptive information relating to a program that was being displayed when the physical reaction was sensed, to provide a viewer preference relating to the descriptive information, and because there is no apparent reason, absent the applicants' disclosure, for combining Zawilinski and Hoffberg in the fashion claimed by the applicants, the applicants respectfully maintain that the rejection of claims 1, 3-8, 10, and 40 under 35 U.S.C. 103(a) over Zawilinski in view of Hoffberg and Strubbe is unfounded, and should be reversed by the Board.

Claims 11-30, 34, 36, and 39

In the rejection of independent claims 11 and 34, upon which claims 12-33 and 36-40 depend, the Examiner relies upon the rejection of claim 1. As detailed above, the combination of Zawilinski, Hoffberg, and Strubbe fails to teach or suggest each of the elements of claim 1, and the Examiner has failed to identify where the prior art discloses each of these elements. Accordingly, the applicants respectfully maintain that the rejection of claims 11-30, 34, 36, and 39 under 35 U.S.C. 103(a) over Zawilinski in view of Hoffberg and Strubbe is unfounded, and should be reversed by the Board.

Claim 10

The combination of Zawilinski, Hoffberg, and Strubbe fails to teach or suggest sensing a change in the viewing environment and transmitting environmental information to the processor for use in analyzing viewer physical reactions, as specifically claimed in claim 10.

The Examiner fails to identify where the prior art teaches transmitting environmental information to the processor for use in analyzing viewer physical reactions. The Examiner notes that Hoffberg teaches an environmental sensor, but fails to identify where Hoffberg teaches using environmental information for analyzing viewer physical reactions.

Because the Examiner has failed to identify where the prior art teaches each of the elements of claim 10, the applicants respectfully maintain that the rejection of claim 10 under 35 U.S.C. 103(a) over Zawilinski in view of Hoffberg and Strubbe is unfounded, and should be reversed by the Board.

Claims 18-22

The combination of Zawilinski, Hoffberg, and Strubbe fails to teach or suggest determining at least one distinguishing characteristic of a displayed programming segment, associating a viewer response corresponding to a physical condition perceived during the display of the programming segment with a viewer preference level, and applying the preference level to enhance program selection, as specifically claimed in claim 18, upon which claims 19-22 depend.

The Examiner asserts that Hoffberg discloses associating a viewer response corresponding to a physical condition perceived during the display of the programming segment with a viewer preference level. This assertion is incorrect.

As noted above, Hoffberg uses direct user input via, for example, a pointing device, to obtain the feedback required to determine the viewer's preferences (Hoffberg, col. 113, lines 47-66, included above). Hoffberg does not determine the viewer's response based on a physical condition while viewing a displayed program having a determined characteristic. Accordingly, the applicants respectfully maintain that the rejection of claims 18-22 under 35 U.S.C. 103(a) over Zawilinski in view of Hoffberg, and Strubbe is unfounded, and should be reversed by the Board.

Claim 19

The combination of Zawilinski, Hoffberg, and Strubbe fails to teach or suggest providing a notification that specified future programming will contain at least one segment possessing the at least one distinguishing characteristic determined in claim 18, as claimed in claim 19.

The Examiner asserts that Hoffberg discloses a notification that a future program will contain a particular characteristic at column 116, line 50 – column 117, line 5). This assertion is incorrect. At the cited text, Hoffberg teaches the conventional presentation of future programs that the system chooses as being likely to be preferred by the user. Hoffberg is silent with regard to identifying any particular feature to the viewer, and cannot be said to provide a notification that a future program will contain a segment possessing the distinguishing characteristic, as claimed in claim 19. Accordingly, the applicants respectfully maintain that the rejection of claim 19 under 35 U.S.C. 103(a) over Zawilinski in view of Hoffberg, and Strubbe is unfounded, and should be reversed by the Board.

Claim 20

The combination of Zawilinski, Hoffberg, and Strubbe fails to teach or suggest inserting into a program a segment possessing the at least one distinguishing characteristic determined in claim 18, as claimed in claim 20.

The Examiner asserts that Hoffberg discloses this element at column 114, lines 12-23. This assertion is incorrect. At the cited text, Hoffberg discloses assuring that a video tape has sufficient room for storing a selected program, identifying partially filled tapes, and filling tapes using a given sequence of programs. Hoffberg is silent with regard to inserting segments into programs, and cannot be said to disclose inserting into a program a segment possessing a determined distinguishing characteristic, as claimed in claim 20. Accordingly, the applicants respectfully maintain that the rejection of claim 20 under 35 U.S.C. 103(a) over Zawilinski in view of Hoffberg, and Strubbe is unfounded, and should be reversed by the Board.

Claims 31-32 stand rejected under 35 U.S.C. 103(a) over

Zawilinski in view of Hoffberg, Strubbe, and Black

Claims 31-32

Claims 31 and 32 are dependent upon claim 11, and in this rejection, the Examiner relies on the combination of Zawilinski, Hoffberg, and Strubbe for teaching the elements of claim 11. As noted above, the combination of Zawilinski, Hoffberg, and Strubbe fails to teach the elements of claim 11, and Black fails to cure this deficiency. Accordingly, the applicants respectfully maintain that the rejection of claims 31 and 32 under 35 U.S.C. 103(a) that relies on the combination of Zawilinski, Hoffberg, and Strubbe for teaching the elements of claim 11 is unfounded, and should be reversed by the Board.

Claims 33 and 38 stand rejected under 35 U.S.C. 103(a) over

Zawilinski in view of Hoffberg, Strubbe, and Bentolila

Claim 33 and 38

Claims 33 and 38 are dependent upon claims 11 and 34, respectively, and in this rejection, the Examiner relies on the combination of Zawilinski, Hoffberg, and Strubbe for teaching the elements of claims 11 and 34. As noted above, the combination of Zawilinski, Hoffberg, and Strubbe fails to teach the elements of claims 11 and 34, and Bentolila fails to cure this deficiency. Accordingly, the applicants respectfully maintain that the rejection of claims 33 and 38 under 35 U.S.C. 103(a) that relies on the combination of Zawilinski, Hoffberg, and Strubbe for teaching the elements of claims 11 and 34 is unfounded, and should be reversed by the Board.

Claim 37 stands rejected under 35 U.S.C. 103(a) over
Zawilinski in view of Hoffberg, Strubbe, and Shinohara

Claim 37

Claim 37 is dependent upon claim 34, respectively, and in this rejection, the Examiner relies on the combination of Zawilinski, Hoffberg, and Strubbe for teaching the elements of claim 34. As noted above, the combination of Zawilinski, Hoffberg, and Strubbe fails to teach the elements of claim 34, and Shinohara fails to cure this deficiency. Accordingly, the applicants respectfully maintain that the rejection of claim 37 under 35 U.S.C. 103(a) that relies on the combination of Zawilinski, Hoffberg, and Strubbe for teaching the elements of claim 34 is unfounded, and should be reversed by the Board.

CONCLUSIONS

Because there is no apparent reason to combine Zawilinski, Hoffberg, and Strubbe absent the applicants' teachings, and because even if such a combination were formed, the combination fails to teach the elements of claim 1, the rejection of which is relied upon by the Examiner in the rejection of each of the other independent claims, the applicants respectfully request that the Examiner's rejection of claims 1, 3-8, 10-34, and 36-40 under 35 U.S.C. 103(a) be reversed by the Board, and the claims be allowed to pass to issue.

Because the Examiner has failed to identify where the prior art teaches the elements of dependent claims 10 and 18-22, the applicants respectfully request that the Examiner's rejection of claims 10 and 18-22 under 35 U.S.C. 103(a) be reversed by the Board, and the claims be allowed to pass to issue.

Respectfully submitted,

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CLAIMS APPENDIX

1. A system comprising:

    a receiver for receiving and displaying television programming;

at least one sensor for sensing a physical reaction by a viewer viewing the displayed programming and generating a signal representative of the physical reaction;

    a processor for receiving and analyzing the signal to determine if it can be associated with at least one recognizable viewer emotional response, whereupon the processor associates the recognized emotional response with a descriptive information relating to a program that was being displayed when the physical reaction was sensed, to provide a viewer preference relating to the descriptive information;

    a memory device for storing the association between the programming description and sensed reaction as the viewer preference;

    a monitoring system that monitors subsequent programs that become available to be displayed;

    a recommender that is configured to recommend subsequent programs based on the viewer preference; and

    a notification system for notifying and/or presenting a subsequent program based on the viewer preference.

2 (Canceled)

3. The system according to claim 1, wherein the at least one sensor comprises a plurality of sensors.

4. The system of claim 3, further comprising a sensor-signal receiver for receiving the signals generated by at least some of the plurality of sensors.

5. The system of claim 4, wherein the sensor-signal receiver combines the received sensor signals so that the processor may analyze an aggregation of sensors signals.

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6. The system of claim 1, wherein the at least one sensor further comprises a video image capturing device.

7. The system of claim 6, further comprising a video processor in communication with the video camera, the video processor comprising an image library for comparing to video images received from the video camera.

8. The system of claim 6, further comprising a video recorder for recording the images captured by the video camera.

9. (Cancelled)

10. The system of claim 1, further comprising an environmental sensor for sensing a change in the viewing environment and transmitting environmental information to the processor for use in analyzing viewer physical reactions.

11. A method of assessing viewer response to television programming that includes one or more distinct segments, said method comprising:

        providing a receiver on which the viewer may view the programming;

        monitoring at least one viewer physical condition;

        associating the at least one viewer physical condition with a viewer response;

        determining when a program segment is being received that corresponds to a pre-selected viewer response previously associated with the at least one viewer physical condition;

        associating a viewer preference relating to the program segment based on the viewer response;

        determining predicted preferences relating to subsequent programming based on the viewer preference; and

        notifying and/or presenting a subsequent program based on the viewer preference.

12. The method of claim 11, wherein in the monitoring includes monitoring a plurality of viewer physical conditions.

13. The method of claim 11, wherein the at least one physical condition includes a change in the physical condition relative to a baseline level, the change being perceived during the monitoring.

14. The method of claim 11, wherein the at least one physical condition includes body temperature.

15. The method of claim 11, wherein the at least one physical condition includes heart rate.

16. The method of claim 11, wherein the monitoring is performed by an image-capturing device for capturing images of the viewer viewing the programming.

17. The method of claim 16, including providing a video processor for receiving the video images captured by the video camera and comparing them to reference data to interpret a viewer movement represented in the captured images.

18. The method of claim 11, including:

      determining at least one distinguishing characteristic of a displayed programming segment;

      associating a viewer response corresponding to a physical condition perceived during the display of the programming segment with a viewer preference level; and

      applying the preference level to enhance program selection.

19. The method of claim 18, wherein program selection is enhanced by providing a notification that specified future programming will contain at least one segment possessing the at least one distinguishing characteristic.

20. The method of claim 18, wherein the program selection is enhanced by inserting into a program a segment possessing the at least one distinguishing characteristic.

21. The method of claim 18, wherein the program distinguishing characteristic is derived from electronic program guide (EPG) information provided with the television programming.

22. The method of claim 18, wherein the program segment distinguishing characteristic is derived from audio, video and text signal properties of television programming.

23. The method of claim 11, including:

      providing a recorder coupled to the receiver to record selected program segments; and

      automatically recording the program segment that corresponds to a pre-selected viewer response.

24. The method of claim 11, including:

      extracting information related to the program segment that corresponds to a pre-selected viewer response from the television programming; and

      automatically displaying the information on the receiver.

25. The method of claim 11, wherein the at least one viewer physical condition includes a biometric response.

26. The method of claim 25, wherein the biometric response includes galvactic skin response.

27. The method of claim 11, wherein the monitoring includes monitoring a visually observable response.

28. The method of claim 27, wherein the visually observable response is related to the gaze of the viewer.

29. The method of claim 28, wherein the visually observable response includes a direction of the viewer's gaze.

30. The method of claim 28, wherein the visually observable response includes a duration of the viewer's gaze in a certain direction before changing to a different direction.

31. The method of claim 27, wherein the visually observable response includes a furrowing of the viewer's brow.

32. The method of claim 31, wherein the monitoring includes measuring a depth of any furrows in the viewer's brow, tending to indicate confusion or lack of understanding.

33. The method of claim 11, wherein the associating of the at least one viewer physical condition with a viewer response is performed at least in part by using a Hidden Markov Model technique.

34. A method of assessing listener response to audio programming, comprising:

    providing a receiver having a speaker for presenting the audio programming to the listener;

    monitoring at least one listener physical condition;

    associating the at least one listener physical condition with a viewer emotional response;

    associating the viewer emotional response with a user preference relating to the audio programming;

    recommending subsequent audio programming based on the user preference; and

    notifying and/or presenting the subsequent audio programming based on the user preference.

35. (Cancelled)

36. The method of claim 34, wherein the audible response includes listener laughter.

37. The method of claim 34, wherein the audible response includes an inflection of a listener's vocalization, tending to indicate a question has been vocalized.

38. The method of claim 34, wherein the associating of the at least one listener physical condition with a viewer emotional response is performed at least in part by using a Hidden Markov Model technique.

39. The method of claim 34, wherein the monitoring includes monitoring an audibly observable response.

40. The system of claim 1, wherein the at least one sensor includes a microphone for picking up vocalizations made by the viewer.

EVIDENCE APPENDIX

No evidence has been submitted that is relied upon by the appellant in this appeal.

RELATED PROCEEDINGS APPENDIX

Appellant is not aware of any co-pending appeal or interference which will directly affect or be directly affected by or have any bearing on the Board's decision in the pending appeal.